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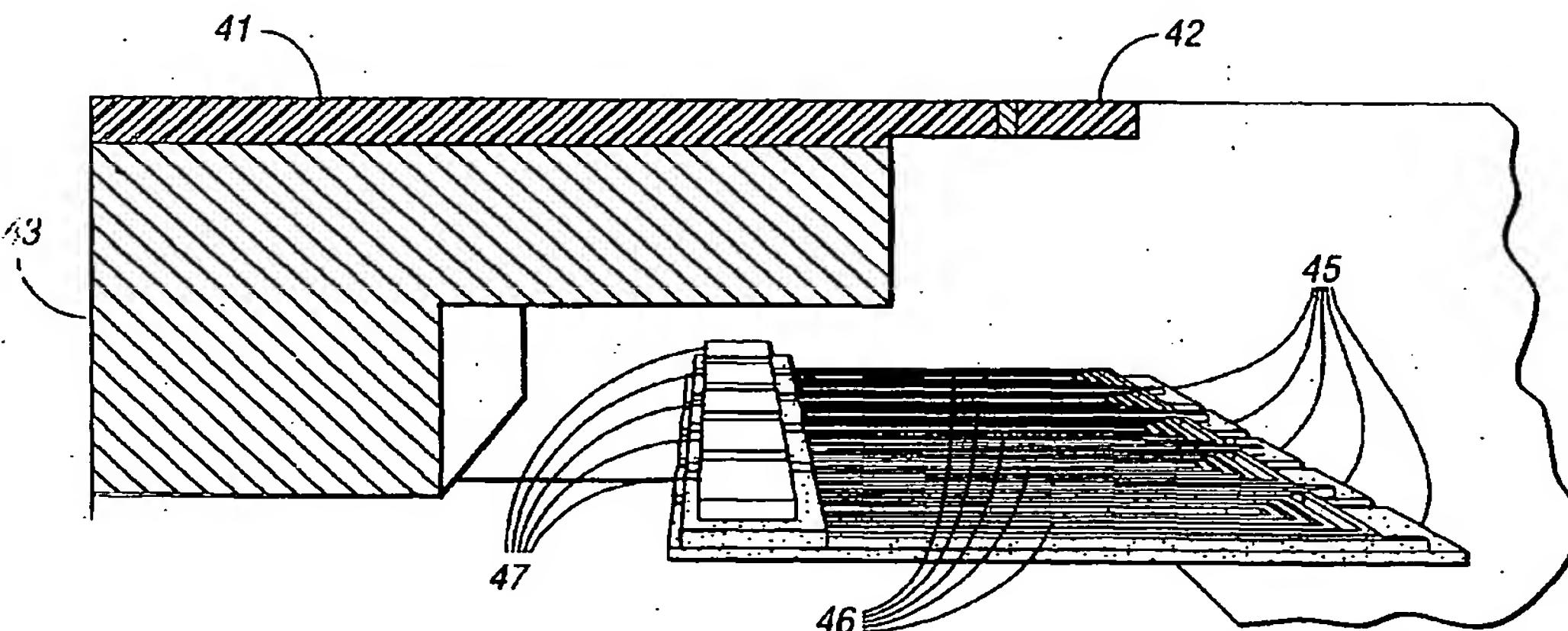
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Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: METHOD AND MICRO POWER GENERATOR FOR GENERATING ELECTRICAL POWER FROM LOW FREQUENCY VIBRATIONAL ENERGY



(57) Abstract: A method and a micro power generator for generating electrical power from low frequency, vibrational energy includes a frequency up-conversion process. The generator is preferably an electromagnetic, vibration-to-electrical power generator which can efficiently scavenge energy from low frequency external vibrations. The generator (41) up-converts low frequency environmental vibrations to a much higher frequency through a mechanical frequency up-converter (44), and hence provides efficient energy conversion even at low frequencies. This mechanical frequency up-conversion process can be realized in a number of ways. A magnetic method is described as an example. After frequency up-conversion, voltage is induced on coils (46) mounted on resonators (45) by electromagnetic induction. Due to the movement of the coils on their respective resonating cantilevers (45) with respect to the magnet (43), voltage is generated on the coils and energy conversion is realized.

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# INTERNATIONAL SEARCH REPORT

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**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC: H01L 41/08( 2006.01),41/113( 2006.01)

USPC: 310/339  
According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 310/339

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2003/041181 A3 (ALBSMEIER) 15 May 2003 (15.5.2003) whole document	1-21
Y,P	US 2004/0135554A1 (CLINGMAN) 15 July 2004 (15.07.2004), whole document	1-21
X	US 2003/0197448 A1 (TANIELIAN) 23 October 2003 (23.10.2003), whole document	1-21

Further documents are listed in the continuation of Box C.

See patent family annex.

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